

**REMARKS**

## The Invention

This invention provides an improved handcuff which, in one embodiment, is comprised of a toothed wheel (a gear) which is in constant engagement with a toothed arm (a swing arm) while the handcuff is closed, is being opened or is being closed. In a second embodiment, the handcuff can include a second gear and in a third embodiment the handcuff can include a third gear.

In the second embodiment, the teeth of the second gear can engage the teeth of the swing arm or the teeth of the first gear. When the teeth of the second gear engage the teeth of the first gear, but do not engage the teeth of the swing arm, then the second gear is called an idler gear and the first gear is called a working gear. When the teeth of the second gear do engage the teeth of the swing arm, but do not engage the teeth of the first gear, then the second gear, like the first gear, is called a working gear and there is no idler gear.

In the third embodiment, the teeth of the first gear and the teeth of the second gear each engage the teeth of the swing arm, but do not engage each other. The teeth of the third gear engage the teeth of the first gear and the second gear, but do not engage the teeth of the swing arm. Accordingly, the third gear is called an idler gear and the first gear and second gears are each called working gears.

In each of the three embodiments, a rod is employed to control the rotation of one gear by direct contact with the gear, and indirectly controls the rotation of any other gear(s) which may be present. It is to be understood, that the swing arm cannot rotate if the gear, or gears, do not rotate. In view of the disclosed contacting relationship between the gear, or gears, and the swing arm, it is clear that only a single rod is required.

193        A substantially circular cam is caused to rotate around a cam axle. The cam is adapted  
194        to cause the rod to linearly move toward or away from the gear.

195        The cam is caused to rotate by an actuation arm comprised of a housing and a cylinder.  
196        The housing is comprised of a hollow interior containing a coil which can conduct an electric  
197        current. The cylinder is adapted to longitudinally slide within the coil in the hollow interior of the  
198        housing, and is slidably positioned within a groove formed in the cam.

199        A pin positioned in the cylinder is adapted to cause the cam to rotate upon linear  
200        movement of the cylinder. As noted, rotation of the cam causes linear movement of the rod.

201 Comments

202 The new Abstract does not employ the word "invention."

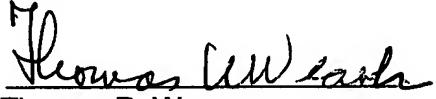
203 The rejection of Claim 1 under 35 USC 112, paragraph 2, is traversed in light of the  
204 cancellation of independent Claim 1 and new independent claims 2 and 13. New claim 2 is not  
205 in Jepson format. New claim 13 is in Jepson format.

206 New claims 2 and 13, in effect, amend claim 1 to recite the structural relationships  
207 between cam, arm, rod, cylinder, groove, slot and gear. Claims 2 and 13 retain the cam plate  
208 with the first slot, first groove and shoulder means and the hollow cylinder coil housing which  
209 slidably moves in the cam first groove.

210 New claim 13 is written in Jepson format, [MPEP 2129 III., 8th edition, revision 2; 37  
211 CFR 1.75(e)]. Please note that the structure recited in the preamble of claim 13 preceding the  
212 phrase, "wherein the improvement," is the work of applicant and, accordingly, may not be used  
213 to reject the claims. *Reading & Bates Construction Co. v. Baker Energy Resources Corp.*, 748  
214 F. 2nd 645, 650, 223 USPQ 1168, 1172 (Fed Cir. 1984); *In re Ehrreich*, 590 F. 2nd 902, 909-  
215 910, 200 USPQ at 510.

216 This application is in condition for allowance. Reconsideration and allowance are  
217 respectfully requested.

218 Respectfully submitted,

219   
220 Thomas R. Weaver  
221 Registration No. 25,613

222 Post Office Box 1405  
223 Duncan, Oklahoma 73534  
224 Telephone: (580) 255-6911